

**What is claimed is:**

1. A method for synchronizing multiple versions of an object, comprising:

receiving a first object;

assigning the first object a unique identifier; and

5 creating a history graph for the first object having a node representing the unique identifier of the first object.

2. The method according to claim 1, further comprising:

adding metadata for the object to describe the object.

3. The method according to claim 1, further comprising:

receiving a second object;

determining whether the second object has an associated unique identifier;

10 updating the history graph to include the associated unique identifier of the second object; wherein the history graph includes vectors describing the relationship between the first and second objects associated with the unique identifiers of the nodes in the history graph, respectively.

4. The method according to claim 3, further comprising:

15 adding metadata to at least one of the first object and the second object, wherein the metadata describes the at least one of the first and second objects and any modifications made to the at least one of the first and second objects.

5. The method according to claim 4, further comprising:

tracking the history of the first object via the history graph and the metadata associated with the first object.

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6. The method according to claim 5, further comprising:

storing the metadata and the history graph information for each of the first and second objects in a central storage location; and

accessing the metadata and the history graph information for each of the first and second objects via corresponding ones of the unique identifiers.

7. A method for synchronizing multiple versions of an object, comprising:

receiving an object having an associated unique identifier, metadata and history graph information;

modifying the object;

assigning a new unique identifier to the object;

updating the metadata and history graph of the object to include a node corresponding to the new unique identifier and a vector describing, via the metadata, the modification performed to arrive at the object corresponding to the new unique identifier.

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8. The method according to claim 7, further comprising:

storing the associated unique identifier, the new unique identifier, the metadata and the history graph.

9. The method according to claim 8, further comprising:

5 tracking the history of the object via the associated unique identifier, the new unique identifier, the metadata and the history graph information.

10. A method for synchronizing multiple versions of an object, comprising:

receiving an object;

10 determining whether the object has an associated unique identifier and metadata and history graph;

assigning the object a unique identifier when it is determined that the object does not have an associated unique identifier; and

15 creating a history graph for the first object having a node representing the unique identifier of the first object.

11. The method according to claim 10, further comprising:

adding metadata to the object to describe the object.

20 12. The method according to claim 11, further comprising:

modifying the object;

assigning a new unique identifier to the object;

updating the metadata and history graph of the object to include a node corresponding to the new unique identifier and a vector describing, via the metadata, the modification performed to arrive at the object corresponding to the new unique identifier.

5           13. The method according to claim 12, further comprising:  
storing the associated unique identifier, the new unique identifier, the metadata and the history graph.

10           14. A method for synchronizing multiple versions of an object, comprising:  
receiving objects;  
assigning unique identifiers to each of the objects;  
creating a history graph for each of the objects having nodes representing unique identifiers and vectors describing the relationship between the objects associated with corresponding unique identifiers of the nodes in the history graph, respectively;

15           adding metadata to each of the objects, wherein the metadata describes any modifications made to the respective objects;

storing the objects, the unique identifiers for each of the objects, the history graphs for each of the objects and the metadata for each of the objects;

receiving a new object;

20           determining whether the new object has a unique identifier and at least one of a history graph and metadata;

comparing the unique identifier, and the at least one of the history graph and the metadata of the new object with the unique identifiers, the history graphs and the metadata for the stored objects; and

5 determining whether the new object is related to at least one of the stored objects based upon the comparison.

15. The method according to claim 14, further comprising:

determining whether to store the new object when it is determined that the new object is related to at least one of the stored objects.

10 16. A computer-readable medium having computer-executable instructions for performing the steps of:

receiving a first object;

assigning the first object a unique identifier; and

15 creating a history graph for the first object having a node representing the unique identifier of the first object.

17. The computer-readable medium according to claim 16, having further computer-executable instructions for performing the steps of:

20 adding metadata for the object to describe the object.

18. The computer-readable medium according to claim 17, having further computer-executable instructions for performing the steps of::

receiving a second object;

determining whether the second object has an associated unique identifier;

5 updating the history graph to include the associated unique identifier of the second object; wherein the history graph includes vectors describing the relationship between the first and second objects associated with the unique identifiers of the nodes in the history graph, respectively.

10 19. The computer-readable medium according to claim 18, having further computer-executable instructions for performing the steps of:

adding metadata to the first object and to the second object, wherein the metadata describes the first and second objects and any modifications made to the first and second objects.

15 20. The computer-readable medium according to claim 19, having further computer-executable instructions for performing the steps of:

tracking the history of the first object via the history graph and the metadata associated with the first object.

20 21. The computer-readable medium according to claim 20, having further computer-executable instructions for performing the steps of:

storing the metadata and the history graph information for each of the first and second objects in a central storage location; and

accessing the metadata and the history graph information for each of the first and second objects via corresponding ones of the unique identifiers.

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22. A computer-readable medium having computer-executable instructions for performing the steps of:

receiving an object having an associated unique identifier, metadata and history graph information;

10 modifying the object;

assigning a new unique identifier to the object;

updating the metadata and history graph of the object to include a node corresponding to the new unique identifier and a vector describing, via the metadata, the modification performed to arrive at the object corresponding to the new unique identifier.

23. The computer-readable medium according to claim 22, having further computer-executable instructions for performing the steps of:

storing the associated unique identifier, the new unique identifier, the metadata and the history graph.

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24. The computer-readable medium according to claim 23, having further computer-executable instructions for performing the steps of:

tracking the history of the object via the associated unique identifier, the new unique identifier, the metadata and the history graph information.

25. A computer-readable medium having computer-executable instructions for  
5 performing the steps of:

receiving an object;

determining whether the object has an associated unique identifier and metadata and  
history graph;

assigning the object a unique identifier when it is determined that the object does not  
10 have an associated unique identifier; and

creating a history graph for the first object having a node representing the unique  
identifier of the first object.

26. The computer-readable medium according to claim 25, having further computer-  
15 executable instructions for performing the steps of:

adding metadata to the object to describe the object.

27. The computer-readable medium according to claim 26, having further computer-  
executable instructions for performing the steps of:

20 modifying the object;

assigning a new unique identifier to the object;



updating the metadata and history graph of the object to include a node corresponding to the new unique identifier and a vector describing, via the metadata, the modification performed to arrive at the object corresponding to the new unique identifier.

5           28.     The computer-readable medium according to claim 27, having further computer-executable instructions for performing the steps of:

          storing the associated unique identifier, the new unique identifier, the metadata and the history graph.

10           29.     A computer-readable medium having computer-executable instructions for performing the steps of:

          receiving objects;

          assigning unique identifiers to each of the objects;

15           creating a history graph for each of the objects having nodes representing unique identifiers and vectors describing the relationship between the objects associated with corresponding unique identifiers of the nodes in the history graph, respectively;

          adding metadata to each of the objects, wherein the metadata describes any modifications made to the respective objects;

20           storing the objects, the unique identifiers for each of the objects, the history graphs for each of the objects and the metadata for each of the objects;

          receiving a new object;

determining whether the new object has a unique identifier and at least one of a history graph and metadata;

comparing the unique identifier, and the at least one of the history graph and the metadata of the new object with the unique identifiers, the history graphs and the metadata for the stored objects; and

determining whether the new object is related to at least one of the stored objects based upon the comparison.

30. The computer-readable medium according to claim 29, having further computer-executable instructions for performing the steps of:

determining whether to store the new object when it is determined that the new object is related to at least one of the stored objects.

31. A computer-readable medium having stored thereon a data structure, comprising:

- (a) a first data field containing data representing a unique identifier for an object;
- (b) a second data field associated with said first data field by describing the object corresponding to the unique identifier; and
- (c) a third field functioning to identify how the object associated with the unique identifier in the first data field relates to other objects based upon the data in the second data field.